



COURSE OUTLINE

PHY117

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Course Code: Title	PHY117: CONCEPTS OF TECHNICAL PHYSICS
Program Number: Name	4005: PRE-TRADES TECHNOLOGY
Department:	PRE-TRADES & TECHNOLOGY
Semester/Term:	17F
Course Description:	This course introduces the student to a number of fundamental concepts of technical physics. It is designed to satisfy the needs of students who are interested in an overview of the concepts rather than a rigorous mathematical analysis of the topics as might be encountered in a traditional engineering level course in physics. The included topics relate to the trades and technology fields of study.
Total Credits:	3
Hours/Week:	3
Total Hours:	45
Substitutes:	PHY100, PHY115
Essential Employability Skills (EES):	#3. Execute mathematical operations accurately. #4. Apply a systematic approach to solve problems. #5. Use a variety of thinking skills to anticipate and solve problems.
Course Evaluation:	Passing Grade: 50%, D
Other Course Evaluation & Assessment Requirements:	Grade Definition Grade Point Equivalent A+ 90 - 100% 4.00 A 80 - 89% B 70 - 79% 3.00 C 60 - 69% 2.00 D 50 - 59% 1.00 F (Fail) 49% and below 0.00 CR (Credit) Credit for diploma requirements has been awarded. S Satisfactory achievement in field /clinical placement or non-graded subject area. U Unsatisfactory achievement in field/clinical placement or non-graded subject area. X A temporary grade limited to situations with extenuating circumstances giving a student

additional time to complete the requirements for a course.
NR Grade not reported to Registrar's office.
W Student has withdrawn from the course without academic penalty.

Books and Required Resources:

Scientific Calculator, similar to Sharp – EL520W

Course Outcomes and Learning Objectives:

Course Outcome 1.

Measurement and The Metric System

Learning Objectives 1.

- differentiate between accuracy and precision
- be aware of various measuring systems such as: Metric, Imperial, and U.S. Customary

Course Outcome 2.

Motion

Learning Objectives 2.

- differentiate between distance and displacement
- understand speed, velocity, and acceleration

Course Outcome 3.

Forces, Work, Energy, Power and Simple Machines

Learning Objectives 3.

- identify forces in nature e.g. gravity, magnetism
- define and describe the units associated with work, energy, power and how forces are used by simple machines

Course Outcome 4.

Properties of Matter: Solids, Liquids and Gases

Learning Objectives 4.

- identify the characteristics of matter in various states
- describe the cause(s) of matter to undergo a change of state
- quantify the units of measure which are associated with change of state e.g. temperature and/or heat

Course Outcome 5.

Basic Electricity

Learning Objectives 5.

- identify the components of electricity: volt, amperage, and resistance
- be aware of fundamental differences between AC and DC current
- configure parallel and serial circuits

Course Outcome 6.

Temperature and Heat

Learning Objectives 6.

- be aware of centigrade, Celsius and Kelvin temperature scales
- be able to convert temperatures between all three scales
- differentiate between temperature and heat

Date:

Monday, December 18, 2017

Please refer to the course outline addendum on the Learning Management System for further information.